

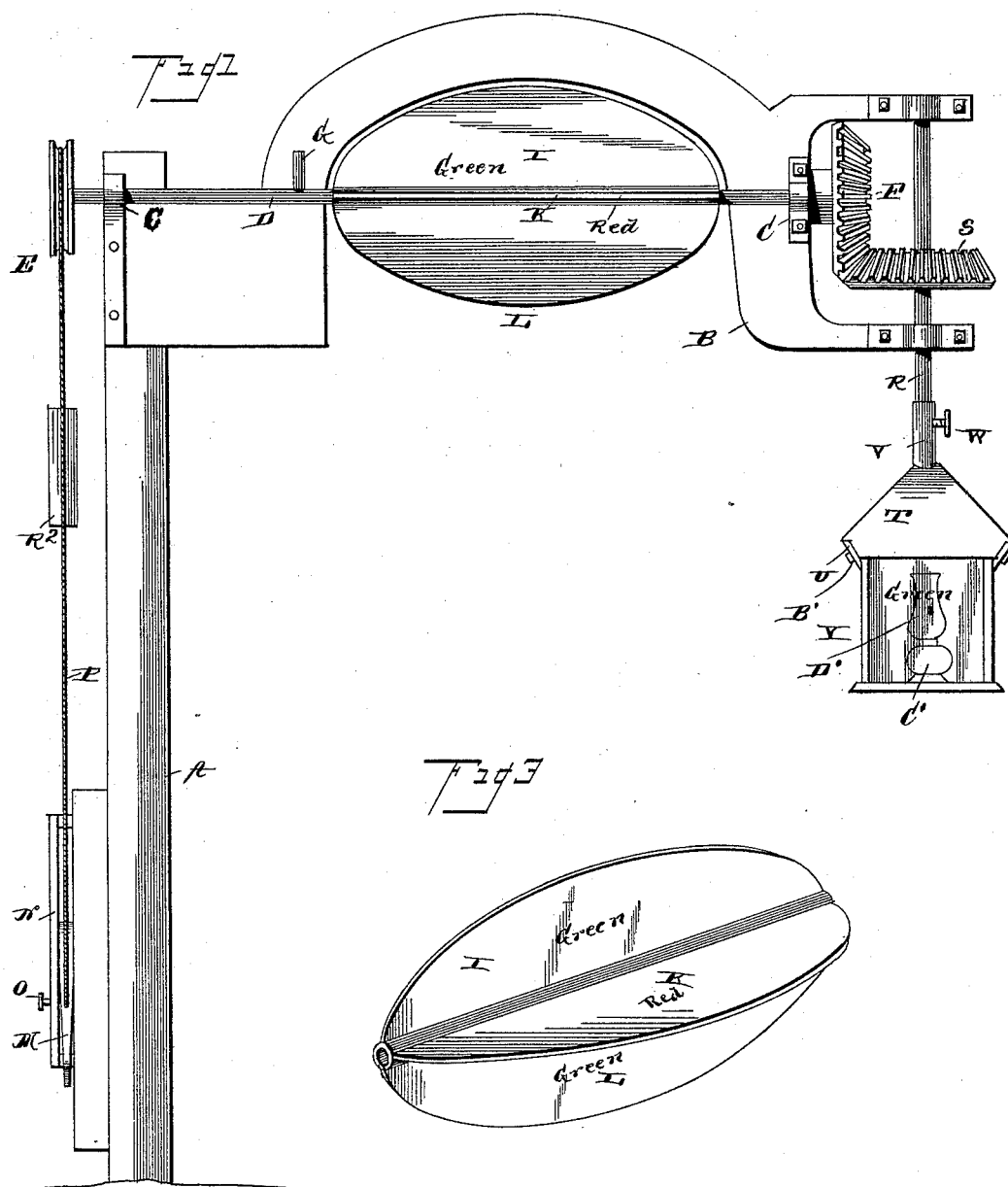
(No Model.)

2 Sheets—Sheet 1.

J. A. ROGERS & A. A. ODEN.
RAILWAY SIGNAL.

No. 422,158.

Patented Feb. 25, 1890.



Witnesses

John Amie
Leahner

Inventors

John H. Rogers
And
Andrew A. Oden
By Their Attorneys
C. A. Snowles

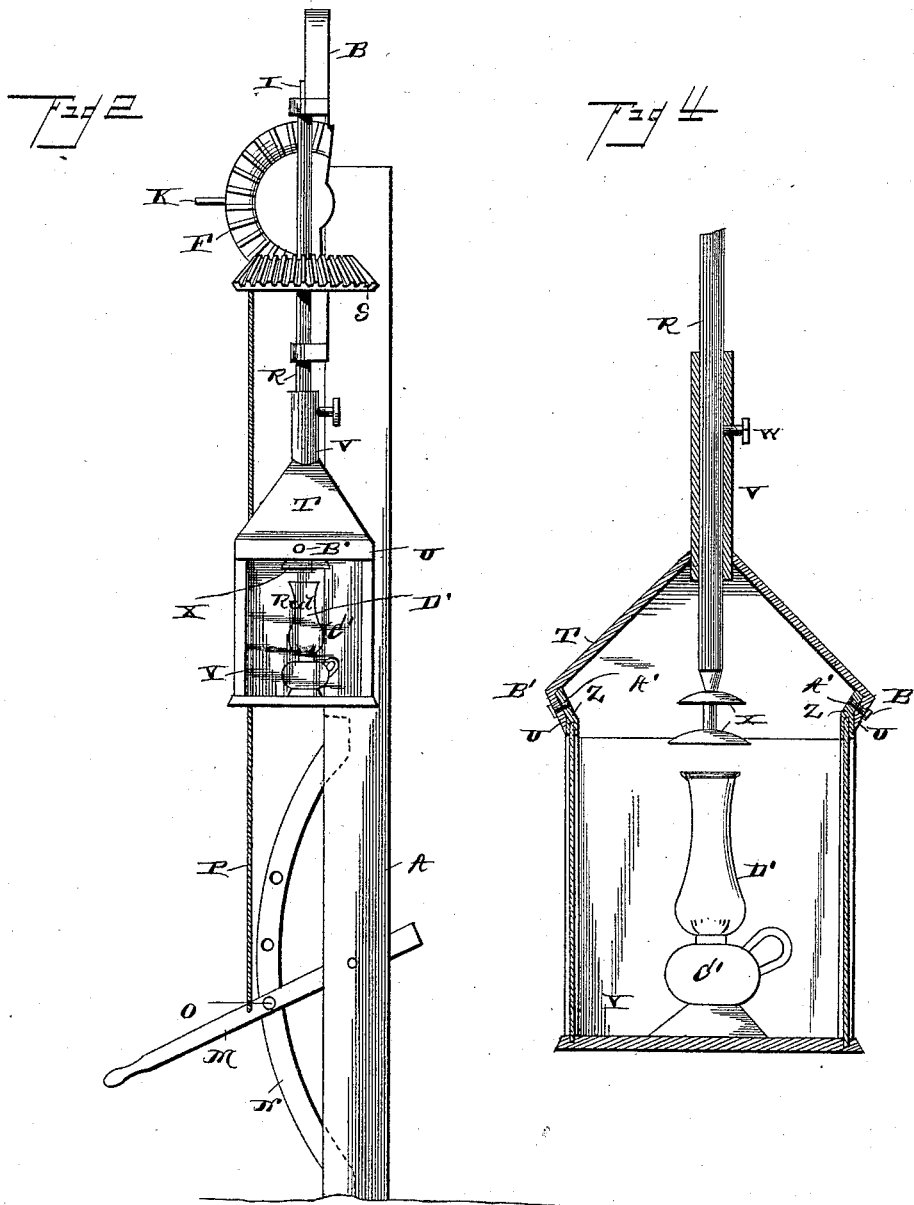
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UNITED STATES PATENT OFFICE.

JOHN ALLEN ROGERS AND ANDREW AUGUSTUS ODEN, OF HARTSELL'S,
ALABAMA.

RAILWAY-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 422,158, dated February 25, 1890.

Application filed March 16, 1889. Serial No. 303,582. (No model.)

To all whom it may concern:

Be it known that we, JOHN ALLEN ROGERS and ANDREW AUGUSTUS ODEN, citizens of the United States, residing at Hartsell's, in the county of Morgan and State of Alabama, have invented a new and useful Improvement in Railway-Signals, of which the following is a specification.

Our invention relates to an improvement in railway-signals; and it consists in the peculiar construction and combination of devices that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the drawings, Figure 1 is a side elevation of the railroad-signal embodying our improvements, showing the same arranged at right angles to the railway-track. Fig. 2 is an end elevation of the same. Fig. 3 is a detail view. Fig. 4 is a detail view illustrating the construction of the signal-lamp.

A vertical standard A is erected on one side of the railroad-track, and to the upper end of the said standard is attached an arched arm B, which is provided with bearings C at its inner and outer ends, in which is journaled a rock-shaft D. A drum E is attached to the inner end of said shaft, and to the outer end thereof is attached a sector-wheel F. A stop-arm G projects from the rock-shaft, and by coming in contact with the arm B is adapted to limit the rotary motion of the rock-shaft to a half-revolution. Three signal-boards I K L are attached to the rock-shaft and arranged at right angles to each other. One of the said signal-boards is painted white, the other green, and the remaining signal-board is painted red, and the same are adapted to display either a white, red, or green surface. A lever M is pivoted to a suitable support near the base of standard A, and is guided by a curved bar N, the latter having openings at its center and upper and lower ends adapted to receive a stop-pin O, whereby the said lever may be maintained either in a horizontal position or in an upper or lower inclined position. A cord or rope P is attached to the drum E. To one end of the said cord or rope is attached a suspended weight R², and the opposite end of said cord or rope is attached to the lever.

From the foregoing it will be understood that by operating the lever the rock-shaft may be partly turned and caused to display either the white, green, or red signal.

We will now describe the signal-lamp and its operating parts for displaying a white, red, or green signal by night. A vertical shaft R is journaled in bearings arranged at the outer end of the bifurcated arm B, and said shaft is provided with a gear-wheel S, which is engaged by the sector F. To the lower end of the shaft R is attached a gabled cap T, the sides of which are provided with depending downwardly-converging flanges U. The lower end of the shaft R extends downward through a sleeve V in the center of the cap, and the latter has a set-screw W to engage the shaft, and thereby clamp the cap thereto. To the extreme lower end of the shaft is attached a disk X (one or more) made of fire-clay or othersuitable refractory material. The lamp-case Y is rectangular in form and has four sides, which are covered with glass. Two of the said sides, arranged opposite each other, are provided with red glass, one of the intermediate sides is provided with green glass, and the remaining side is of white glass; and the lamp is so arranged with relation to the signal-boards that the light displayed by the lamp in either direction will correspond with the color of the signal-board presented in the same direction. The said lamp-case Y is provided with outwardly-flared flanges Z at its upper end, which engage the flanges U, and said flanges U and Z are provided with openings A', adapted to register with each other when the lamp-case is properly adjusted under the cap, and pins B' or keys of suitable construction are provided and adapted to be inserted in said openings, whereby the lamp-case will be rigidly secured to the cap and suspended therefrom. The lamp C', arranged in the case, may be of any suitable construction, but should be provided with the chimney D', to the end that it will burn with a clear and steady flame. The refractory disk X serves to deflect or disperse the heat which rises from the lamp-chimney and prevent the same from striking against and injuring the cap.

The standard A may be dispensed with and the arm B attached directly to the depot or station, in which case the operating-lever M will be located within the depot or station.

5 Having thus described our invention, we claim—

1. The combination, with a suitable support, of the arched arm, the rock-shafts having an outwardly-extending stop-arm, the
10 semaphore secured upon the rock-shaft and comprising three arms or blades, one arranged at right angles to the other, said blades being accommodated in the recess formed by the arched bar, and operating mechanism,
15 substantially as set forth.

2. In a railway-signal, the vertical shaft R and the cap T, secured thereto and having the depending flanges U, in combination with the lamp-case having the flanges Z at its upper end adapted to engage and lock with the
20 flanges U, substantially as described.

3. In a railway-signal, the shaft R, having the refractory disk at its lower end, and the lamp-case or lantern having its top secured
25 to the said shaft, the said disk being arranged within the lantern-case and directly over the lamp, substantially as described.

4. In a railroad-signal, the combination of the arched arm B, having the bifurcated
30 outer end, the horizontal shaft journaled in

bearings on the said arched arm and having the signal-board and the drum, the lever M, the rope attached to the drum having the weight at one end, and the opposite end attached to the lever, the vertical shaft R, jour- 35
naled in bearings at the outer end of arm B, the gear-wheel S on said shaft, the sector F, attached to the horizontal shaft and engaging the gear-wheel, and the signal lamp or lantern suspended from and adapted to be revolved 40
by the shaft R, substantially as described.

5. The curved arm B, having horizontal bearings C, and terminating in vertically-opposite bearings, in combination with the rock-shaft D, mounted in the bearings C, and carrying the blades I K L, located in the curve 45
of the arm, the gear F at the end of shaft D, the shaft R, mounted in the vertical bearings, and the gear S, mounted on shaft R and meshing with gear F, substantially as specified. 50

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

JOHN ALLEN ROGERS.
ANDREW AUGUSTUS ODEN.

Witnesses:

I. L. DAY,
W. A. BARCLEFT.